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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,595

01/23/2004

Habib Riazi

8-20-7

7729

7590

03/11/2005

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EXAMINER

DUONG, DUC T

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/763,595

Applicant(s)

RIAZI ET AL.

Examiner

Duc T. Duong

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-30 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 2.  
 4) ☐ Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Sayeed (U.S. Patent 6,456,653 B1) in view of Schafer et al (U.S. Patent 6,134,267)..

Regarding to claims 1, 3, 9, and 11, Sayeed discloses an orthogonal frequency division multiplexing OFDM transmitter (Fig. 1) for transmitting a signal comprising an encoder 130 (col. 3 lines 65-67 and col. 4 lines 1-3) for modulating said signal, a transformer 150 (col. 4 lines 44-57) for creating said signal having a plurality of sub-carriers, and means 140 (col. 4 lines 15-24) for inserting (padding) an identifying signal (zero) on inactive sub-carriers.

Sayeed fails to teach the identifying signal identifies a transmitter (claims 1 and 9) and the inactive sub-carriers will be modulated with a predetermined transmitter identifier information TII value (claims 3 and 11).

However, Schafer discloses a DAB system using a TII signal to identify a transmitter, wherein the TII signal is mapped onto a set of carriers (col. 1 lines 35-39).

Thus, it would have been obvious to one of ordinary skilled in the art, at the time of then invention, to employ a TII signal to identify a transmitter as taught by Schafer in

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Sayeed's system so that the receiver can automatically filter local information from a data stream.

Regarding to claims 2 and 10, Sayeed discloses the encoder differentially modulates said signal in the frequency domain (col. 3 lines 61-63).

Regarding to claims 4 and 12, Sayeed discloses the inactive sub-carriers carrying said identifying signal are transmitted at a reduced power (col. 5 lines 5 lines 51-56; noted the inactive carriers are transmitted at less power than the active carriers).

Regarding to claims 5 and 13, Sayees discloses the identifying value (zero) is mapped onto a set of complex symbols (col. 3 lines 46-50).

Regarding to claims 6 and 14, Sayeed discloses the inactive sub-carriers carrying said identifying signal are transmitted with each OFDM symbol (Fig. 4A col. 4 lines 5-27; the region 420 of buffer 140 shows the inactive sub-carriers carrying identifying signal or zero).

Regarding to claims 7 and 15, Sayeed discloses the transformer implements an Inverse Fast Fourier Transform (col. 4 lines 44-57).

Regarding to claims 8 and 16, Sayeed discloses the transformer implements an orthogonal transform (col. 3 lines 19-32).

Regarding to claims 17, 19, 24, and 26, Sayeed discloses an orthogonal frequency division multiplexing OFDM receiver (Fig. 2) for receiving a signal comprising a decoder 230 (col. 5 lines 25-34) for demodulating said signal, a transformer 220 (col. 5 lines 21-23) for transforming said received signal to recover an signal in the frequency

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domain having a plurality of sub-carriers, and means 225 (col. 5 lines 25-28) for processing an identifying signal (zero) received on inactive sub-carriers.

Sayed fails to teach the identifying signal identifies a transmitter (claims 17 and 24) and the inactive sub-carriers will be modulated with a predetermined transmitter identifier information TII value (claims 19 and 26).

However, Schafer discloses a DAB system using a TII signal to identify a transmitter, wherein the TII signal is mapped onto a set of carriers (col. 1 lines 35-39).

Thus, it would have been obvious to one of ordinary skilled in the art, at the time of then invention, to employ a TII signal to identify a transmitter as taught by Schafer in Sayed's system so that the receiver can automatically filter local information from a data stream.

Regarding to claims 18 and 25, Sayed discloses decoder differentially demodulates said signal in the frequency domain (Fig. 2 col. 5 lines 25-34).

Regarding to claims 20 and 27, Sayed discloses the inactive sub-carriers carrying said identifying signal are received at a reduced power (col. 5 lines 5 lines 51-56; noted the inactive carriers are received at less power than the active carriers).

Regarding to claims 21, and 28, Sayed discloses the inactive sub-carriers carrying said identifying signal are received with each OFDM symbol (Fig. 4A col. 5 lines 5-27; the region 420 of buffer 140 shows the inactive sub-carriers carrying identifying signal or zero).

Regarding to claims 22, and 29, Sayed discloses the transformer implements a Fast Fourier Transform (col. 5 lines 21-23).

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Regarding to claims 23, and 30, Sayeed discloses the transformer implements an orthogonal transform (Fig. 3 col. 5 lines 40-50).


***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 571-272-3122. The examiner can normally be reached on M-F (9:00 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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RICKY NGO  
PRIMARY EXAMINER